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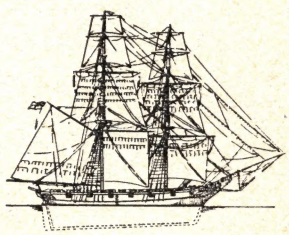

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Model Ships and Power Boats

INCORPORATING *Ships and Ship Models*

EDITED BY EDWARD BOWNESS

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The Ship's Log

OUR COVER PICTURE

Shiplovers of all types and interests will be pleased to know that during the recent survey the hull of the *Cutty Sark* has been found to be in a sound condition, and that as a consequence she will be repaired to a certain extent and painted and moored in the river in time for the Festival of Britain. Her rigging is in rather a bad condition but we do not imagine she will be re-rigged to any great extent at present, but there are indications that at some future date she may be restored to her original condition. In any case it is good to know that she is to be preserved. Our cover picture is from a photograph we were able to take through the courtesy of the Port of London Authority to whom our thanks are due. Further pictures and notes will be found on pages 50 and 51 of this issue.

THE M.E. EXHIBITION

The exhibition this year will be of special interest to ship modellers. In addition to one or two extra cups for ship models the central feature is to be a tank 30 ft. × 40 ft. for showing models in action and under sailing conditions. Radio controlled ships will naturally take a prominent part and if we can overcome the problems involved in providing wind it may be possible to demonstrate the sailing of yachts and prototype ships under radio control. This is a development which is almost certain to come ultimately and we are keenly interested in its possibilities. A further use of the tank could be to test power boats entered in the Competition Section at least for " tow rope " pull similar to the " draw bar " pull test for locomotives. This would prove not only the power of the engine but also its suitability for the hull in which it is fitted. The consent and co-operation of the owner of the boat to be tested would of course have to be secured, but it would greatly enhance the award if it was based on satisfactory performance in addition to other qualities. We would be pleased to have the views of intending competitors on this matter.

RADIO CONTROL AND SHIP DESIGN

Radio control enthusiasts will be interested to hear of its latest applications. At the Admiralty Experimental Works, Haslar, electrically propelled wooden models of ships are run in Haslar lake, and up to the present have been controlled either by human helmsmen or by a special time clock. The aim of the experiments is to study the steering performance of the full sized ship, and more particularly to assess the effect of alterations to the rudder and afterbody of the ship. A helmsman is frequently too heavy for the model and is also inclined instinctively to shift his weight when the model goes into a turn. A time clock has disadvantages, as, apart from the accuracy of setting required, the model sometimes gets out of the field of view of the recording camera or worse still—may collide with the bank. Radio control seems to provide the solution to the problem. The Dial Code system has been tried with fairly satisfactory results but the Discriminator system seems to promise even better results. Additional information on this very interesting development may be found in a recent Admiralty Bulletin No. 33.

*MODEL POWER BOAT TOPICS

By Edgar T. Westbury

IN the model power boat world, " spring has been a little late this year," and the season has made a somewhat slow start. This fact is probably accounted for to some extent by the inclement weather during the late winter and early spring, which has deterred many enthusiasts from carrying out preliminary pond trials of new or refurbished boats. It is, therefore, too early to attempt to make forecasts of the sort of activity we are likely to see this year—I have never aspired to the gift of prophecy, anyhow—but there are many indications that progress in all types of boats is being maintained, albeit somewhat slowly, and that model power boat events will not only be more numerous than ever before, but also more popular. Many new clubs are springing up, and I hear of the revival of one of the earliest clubs, which has been in suspended animation for many years. No doubt, there would be still greater activity in this direction except for the unfortunate difficulty which many clubs experience of having no suitable water on which to run boats.

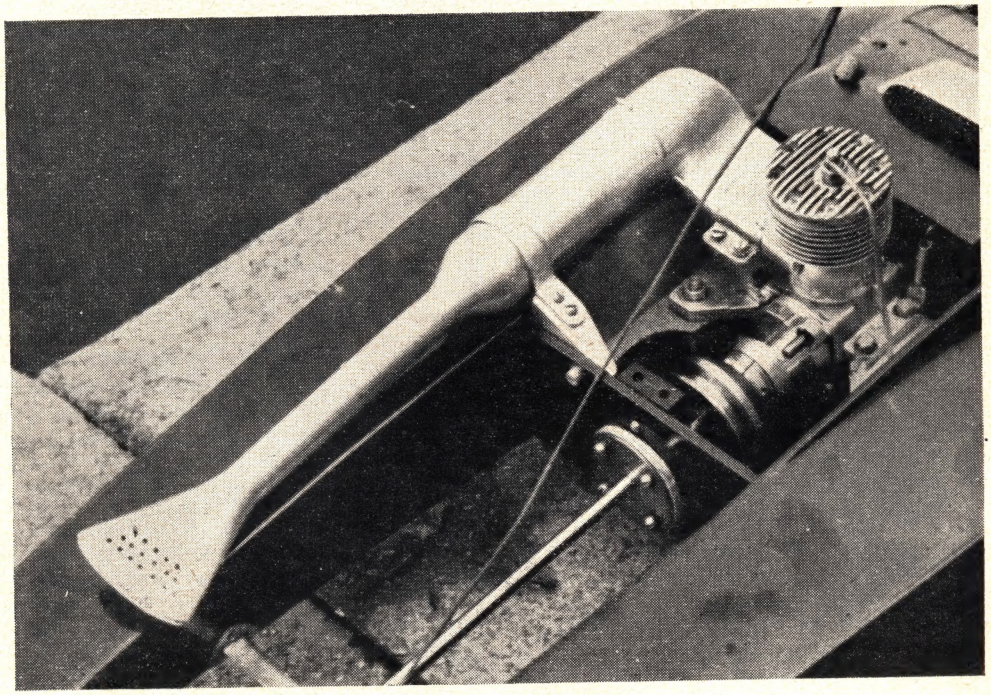
I have had a preliminary glimpse of several new and interesting developments, both in prototype and racing boats. Some of these are as yet only in the embyro stage, but others may be expected to make their appearance at regattas during this season. One of our most illustrious flash steam exponents has a new " C " class boat nearing completion, while an almost equally well-known personality in the i.c. engine field is working on a split-single 2 stroke engine which has more than the usual quota of interesting features. I welcome this news, which shows that individual enterprise is still very much alive, and that amateur constructors still lead the way in the development of new and advanced features of engine design.

Continued from April issue, page 24.

SOME NOTES ON SILENCING

I mentioned above the difficulty of finding suitable water on which to run boats. Many districts where there is considerable interest in model power boats are very badly served in this respect, but an even greater misfortune is that several ponds which were formerly available, and indeed were among the most popular for model power boat events, have now been closed for this activity, mostly on account of noise.

Although I have harped on this particular string many times before, I think the time is now ripe to raise the topic once more, with even greater emphasis.



The expansion box and fishtail of Mr. G. Stone's " Lady Babs II "

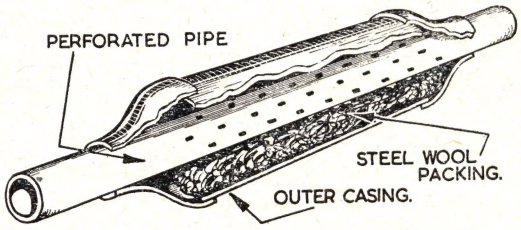
I have been telling the model power boats clubs for several years that, in the interests of self-preservation, drastic action on this matter will sooner or later have to be taken. No matter how difficult the problem, or how irksome the restrictions, surely it is better to go to any amount of trouble to produce quieter boats than to incur the penalty of perpetual silence by the banning of model power boat activities altogether.

Many of us may regard the complaints of the public about the noise produced by our model engines as merely frivolous, and resent the rather high-handed attitude of Parks Committees and other local authorities, but the attitude of mind which regards silencing regulations simply and solely as a necessary evil, or an unwilling sop to appease public opinion, is quite wrong. The user of a noisy engine is just as much an enemy of his fellow-enthusiasts as of the citizen who seeks peace and quiet in the public parks.

It is quite true that the model power boat fraternity have done more to combat the noise problem than any other organisers of competitive model events. We have yet to hear of any attempt being made officially to reduce the noise of model cars or aircraft, but this is no excuse for slackening our own efforts in this direction. No doubt there are many enthusiasts who will disagree with me, but I think sacrifices of speed, spectacle or stunt value are fully justified, if, by doing so, we may improve our relations with public authorities, and save those waters which remain to us from being closed down to model power boats.

I have received a good many letters from readers relating to the design of silencers for model power boats, but most of them asked for definite information on the design of silencers, and there is a general impression that this is a problem which can be solved by formula and set rules of design. My own experience, however, is all to the contrary ; I have found, in my own experiments, that different types of engines require different treatment in the design of silencers. Some engines will not tolerate the least attempt to interfere with the exhaust arrangements, and their efficiency is destroyed by the slightest amount of back pressure, while other engines are affected very little, and some actually work better with a well-designed silencer than they do without one. This is largely a matter of port and passage design, but the information available on the subject is not sufficient to arrive at any definite conclusions, or lay down standard rules of silencer design. It may, however, be said that practically any device which will enable the exhaust gases to expand and lose a certain amount of pressure before reaching the atmosphere, will reduce the noise to some extent.

It is, of course, fairly obvious that the faster boats go, and the greater the speed and efficiency of their engines, the more acute becomes the problem of noise, and therefore the engines which stand most in need of silencing are those of the highest efficiency, though equally obvious is the fact that the people who run such engines are the least likely to be interested in applying silencers to them. It should not, however, be considered that the only way in which efficiency can be improved is to produce noiser and noiser engines. There have been many engines of really high efficiency which have been remarkably quiet in running, and on the other hand, some engines seem to use up most of their efficiency in producing noise, so that they have little to spare to drive the shaft. Noise of any kind must necessarily require a certain amount of energy to produce, and excessive noise is actually a sign of waste. The fact that most fast boats have more or less noisy engines should not prevent or discourage attempts to make them quieter.

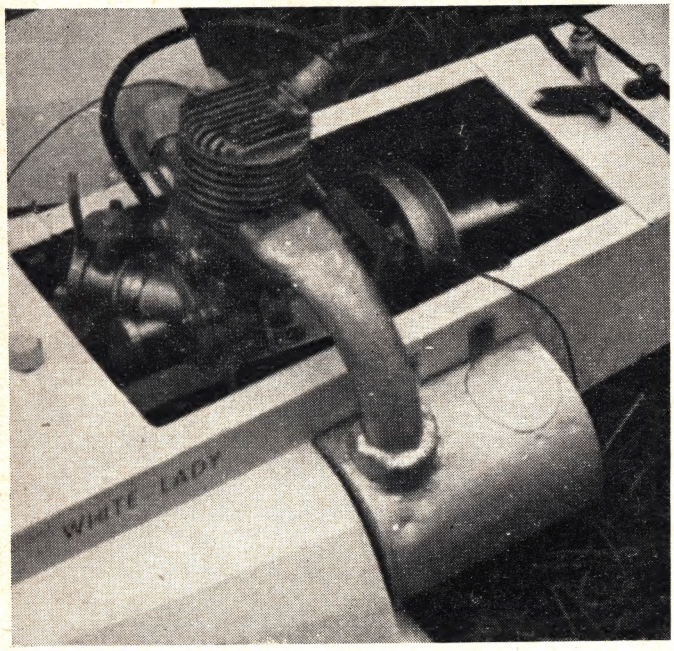


A part section of the Burgess type silencer (not to scale)

One of the greatest obstacles to progress in silencer design is that many enthusiasts actually revel in exhaust noise, and regard it as an added attraction. This may apply even to people who have no real technical interest in engines, and very often it happens that people think noisy engines are efficient, whether they are or otherwise. Some of the devotees of the speedway get their biggest thrill from the noise of the engines, though in many cases the actual speeds obtained are not really high. Similarly, it has often been found, in model speed boat events, that when a quiet-running boat attains a high speed, the spectators at the pond-side find it difficult to believe that such a speed has actually been attained.

TYPES OF SILENCERS

In the events organised by the Model Power Boat Association, silencers are compulsory, and although some of the types of silencers do not always produce as effective results as might be wished, it is fairly clear that the universal adoption of silencers has produced a good deal of improvement in the reduction of noise, without, in any way, holding up progress in speed. The form of silencer which is most commonly employed on boats running in M.P.B.A. events consists of an expansion chamber two or three times the volume of the cylinder displacement, and preferably connected as close to the exhaust port as possible. In some cases, further diffusion arrangements are added, such as a fishtail, which helps to break up the exhaust gases and lower their pressure to a greater extent than is possible in an open pipe. Another principle, which has been extensively employed in model power boat practice, is that of the Burgess type of silencer, which is so well known in connection with larger engines as to call for only a brief description. It consists essentially of a straight-



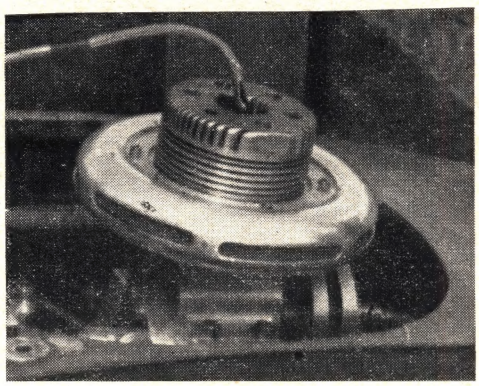
One of the twin silencers of Mr. Pym's " White Lady "

through perforated pipe, having an outer jacket of larger diameter round it, the annular space being packed with steel wool or some similar absorbent material. In this type of silencer, the idea is to absorb the sound waves by diffusion through the outer wall of the perforated pipe, without in any way imposing back pressure or interfering with the flow of the gases. My own experience is that this type of silencer is best used as an addition to the expansion chamber, rather than as a substitute. Yet another method of silencing which has, so far, received little attention from model power boat constructors is that in which the exhaust gases are cooled by water injection, or otherwise being brought in contact with water. This is, perhaps the most effective method of silencing of all, as the sudden cooling of the exhaust gases, so far from setting up back-pressure, actually reduces it, and may, under certain circumstances, be employed to produce a vacuum. Even the cooling of the silencer body by placing it in a position where it encounters spray has some effect on reducing back pressure.

I very frequently encounter users of engines who inform me that this or that type of engine is unsuitable for fitting a silencer, but I have yet to see any type of engine to which some form of silencer could not be fitted, given a certain amount of ingenuity. Many of the commercial engines, especially those of the glow-plug or compression-ignition types, have exhaust ports on both sides of the engine or, in some cases, all round the base of cylinder. In such cases, it may be necessary to construct some form of jacket which can be clamped round the cylinder, but great care is necessary in avoiding any pressure which might possibly cause distortion of the cylinder barrel. The annular silencer fitted to Mr. W. H. T. Meageen's *Samuel* is an example of the type which can be adapted for all-round porting. In the case of twin-port engines, it is usually most convenient to fit dual silencers, as this maintains the symmetry of the engine, but it is most important that the silencers should be balanced in dimensions and in port areas, or it may be found that nearly all the exhaust is diverted to one side, and this may, in some cases, affect engine efficiency.

SILENCERS FOR ENCLOSED BOATS

In the case of engines fitted to enclosed boats, such as small runabouts and cruisers, I regard some form of exhaust system as a necessity, even if only to keep the inside of the boat reasonably clean. This system may, with advantage, incorporate a silencer, which can be designed also to act as an oil-trap and prevent yet another objectionable feature of the model power boat, namely its propensity to scatter oil over the surface of the pond. When engines are fitted to prototype boats, in which speed is not the primary aim, it is generally possible to use engines that are inherently much less noisy than racing types, and therefore the necessity for a silencer is also less acute. It is, however, equally desirable, and such boats may be fitted with silencers having internal baffles, or porous material, which will diffuse the pressure very effectively, and reduce noise to the minimum. There are several examples of i.c.-engine driven boats which have a very soft and pleasing exhaust murmur, which is a great improvement over those which have an aggressive staccato bark, quite out of character with the type of boat to



Annular silencer for all-round porting, as used on Mr. W. H. T. Meageen's " Samuel "

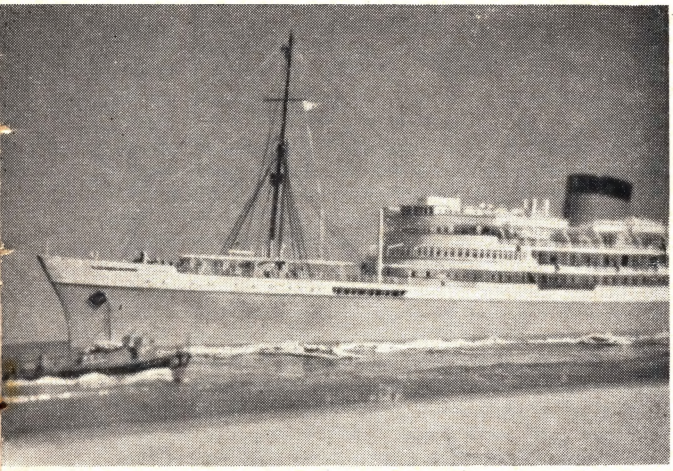
which they are applied. The fitting of an effective silencer, therefore, will not only avoid the common objection to model power boats among the public, but by improving realism, will help to attract many people to take a greater interest in boats.

To be continued

*Miniature Liners

By

DONALD McNARRY



The " Stirling Castle," port bow

THE method I used in making this window screen is exactly the same as used for the forward deck windows on the *Stirling Castle* and on the rounded bridge fronts of the *Queen Elizabeth.*

Having experimented by trying to cut out each window separately with a razor blade and finding that it was almost impossible not to cut through the uprights between each window I discarded this idea and decided to cut the windows out in long slots, one slot for each group and then put the dividing upright pieces in afterwards. I think Fig. 7 is fairly self-explanatory but a few hints may also help.

A long strip of Bristol board was marked out to the correct length and width ; two lines were then drawn along its entire length, the top one representing the top edge of the windows and the lower one the bottom edge ; vertical lines were then drawn with a set square between these two lines to denote the various groups of windows. If both port and starboard window screens are set out side by side on the same piece of Bristol board this latter operation can be carried out both sides at once. The spaces between these groups of windows should exactly coincide with the position of the davits when these are fitted ; as the latter must also line up from a plan view it is as well to take some extra trouble both when marking out and fitting the finished screen.

Each group was then numbered and cut out with a razor blade. I found it best to do all the tops and bottoms first and then the sides. The result was a long strip of Bristol board with 29 slots cut out, each, eventually, to be divided up into anything from 2 to 30 separate windows, the two single windows were also cut out.

A piece of fine cotton was then run through a rag soaked in white paint and when dry glued along the inside of this strip in such a position as to form the horizontal division between the top and bottom windows.

*Continued from April issue, page 37.

The cellophane was next glued on the strip of Bristol board with amyl-acetate cement. I used a fairly stiff type of cellophane for this job as anything like a jam pot cover cellophane has a tendency to wrinkle and looks horrible.

The uprights were cut from the previously numbered pieces taken from the slots and glued in from the outside. This method ensures a perfect fit as the amount of waste lost in cutting the slots with a razor blade in the first place is almost negligible and in any case is taken up with the glue in fixing.

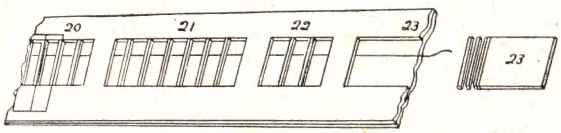


Fig. 7.

When all the uprights were in and the windows completed, the whole strip was fixed to the edges of the boat and promenade decks, again with pear drop cement. The thickness of the Bristol board and cellophane in this strip represents just nicely the slight overhang of this deck, as seen on the prototype.

An overlay of the same thickness was fitted on the, as yet, uncovered portion of the bridge inlay ; this also forms the side bulwarks and should have a group of four windows cut out and also a slot for the navigation lights.

Various small pieces of Bristol board were fitted on the rounded parts of the after ends of the decks to form the curtain plates, etc. ; any cracks can be filled in as already described.

The really difficult part of the window screens was the painting, as the white paint had a remarkable tendency to run off the Bristol board and cover the cellophane and had to be scraped off very carefully when dry. I managed to give the window screens about four coats of paint, each rubbed down very

carefully with pumice powder and a dry chamois ; a damp chamois should not be used on this job as the powder is inclined to stick to any surplus glue there may be left in the corners of the windows.

I next made the long continuous deck house on the boat deck ; it is about 16 ft. high on the prototype (i.e. two decks). This was made from a piece of mahogany decked over with painted Bristol board and screwed down, the usual precautions being taken about screw heads. Several saw cuts were made on the underside so that it would conform to the sheer of the ship.

The overlays of paper were put on in sections after the deck house was screwed on. This was an intriguing business as there were lots of little landings,

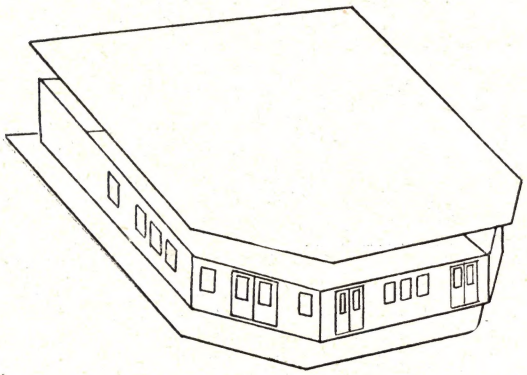


Fig. 8.

porches, doorways and outside struts to be modelled, quite unlike the deck details on any previous model I had made.

There are five houses on this upper sports deck, the forward one butts on to the after side of the bridge structure and was made hollow (Fig. 8) ; there are four sets of double doors in this tourist shelter, two sets were shown open. The lower piece of the house was painted to represent linoleum.

The aftermost deck house, the verandah grill, is also hollow and was rather a complicated structure to make, there being innumerable windows, doors and partititions. Immediately forward of this deck house is a small fan and vent room which was made in the solid, the two remaining houses on which the funnels were stand also made of sycamore.

These two houses are quite different from any of the others on the ship as the forward ends of each are entirely given up to ventilating machinery on the prototype and as far as I could gather were fitted with vertical grey painted vent louvres. To represent these on the model I painted the overlays with grey poster colour and lined them with a pencil, the white framework being made from narrow strips of paper.

Part of both the funnel houses and the vent house forward of the verandah grill were decked over with black-painted paper, as they are steel decked in the actual ship. I found it made a much neater job to cut out two oval holes in the decking of the funnel houses for the funnels to fit in, the result being much better than screwing the funnels to the top of the deck.

FUNNELS

The funnels on the *Stirling Castle* I made by binding a strip of paper round a wooden former, gluing as I went ; the end of the strip was cut to finish on the forward side so that it was hidden from view by the Jacob's ladder that runs up the front of the funnel to the syren. The result was not very successful as the grain of the paper showed through even after about ten coats of paint.

The *Queen Elizabeth's* funnels being entirely bare of external fitments except the syrens, a new method had to be devised, otherwise the join would show. I eventually used some paper-thin veneers of holly mounted on tissue paper (to stop them splitting) and bound it round a former the exact size of the internal diameter of the funnels.

When the whole thing was quite dry I was able to sandpaper it down until the join was quite invisible.

There are several doors in the base of the *Queen Elizabeth's* funnels ; I showed one of these open on the forward starboard side of the after funnel.

The syrens on both models were shaped up from small pieces of holly, the internal details of the funnel tops were also made up of holly and pieces of Bristol board (see Fig. 9). Sections of the formers on which the funnels were made were then screwed down to the tops of the respective deckhouses and the funnels slid on these and were glued down. The black

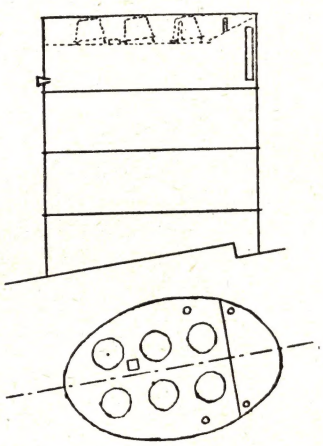


Fig. 9.

flanges of the *Queen Elizabeth's* funnels were pieces of black cotton glued on after the painting was finished. It is as well to leave these oversize until the glue is dry as the cotton shrinks in the drying and this will leave a space at the join.

DECK FITTINGS

Personally, I always think the making of deck fittings on a model is the most fascinating part, all

sorts of unpromising materials can be pressed into service with sometimes quite remarkable results. As deck fittings are much the same on all large liners a general description of the methods used for construction will suffice for both ships.

A lot has been written about the inclusion and rejection of detail on miniature ship models and frankly I have never been able to understand the ship modeller who willingly leaves off details merely because his model is a miniature. Obviously some very small details, are almost impossible to make even at 50 ft.-1 in. and will have to be left out, but in my opinion, if an item of detail can be made to scale, then it should be put in. The question of the finished model looking overcrowded will not arise if everything is to scale. Generally speaking I always find the most limiting factor is lack of detail on the plans one works from.

VENTILATORS

On the *Stirling Castle* there are literally dozens of cowl type ventilators and only one that I could see on the *Queen Elizabeth.* I made all of mine by cutting short lengths of copper wire of various thicknesses for the stems and gluing on the top, half turnip seeds hollowed out ; each vent was then painted with a thick paint made up of white dry colour, white French polish and methylated spirit ; the thickness of the paint fills up any little cracks just below the cowl. I chose turnip seeds because they are nice and round and small. Larger cowls can be made from mustard seeds. Each seed was put on a piece of glass and held between tweezers and cut in half with a razor blade (thin variety), each half seed was then picked up between the left fore-finger and thumb and hollowed out with a dentist's burr twisted with the right hand. You can't pick the seeds up with tweezers at this stage as they just crumple up.

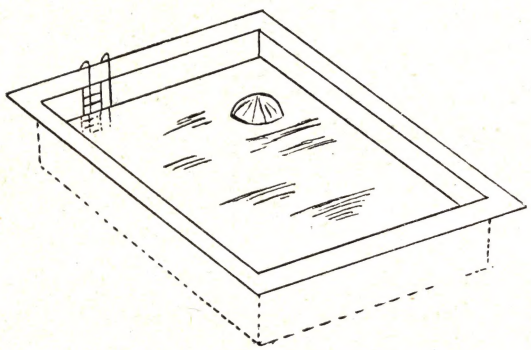


Fig. 10.

The hollowed out inside of the cowls were then painted with red poster colour and the completed vent set in the already prepared holes in the deck.

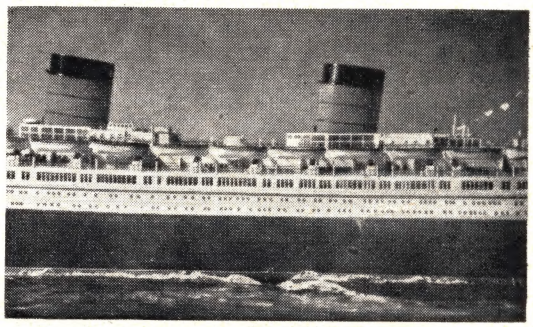
The French type vents were easily made from ordinary pin heads filed to shape ; there were various unusual types of vents on the *Queen Elizabeth,* some shaped like hatch covers and these were carved in holly.

On the *Stirling Castle* there is a lot of vent machinery, fans and fan motors. To make these I prepared several dowels of holly of various diameter and square sectioned strips and assembled most of the machinery out of these.

To facilitate painting these small parts I usually fix them on entomological pins and stick the pins in a lump of plasticine while the paint is drying.

HATCHES

The hatches on both the *Stirling Castle* and *Queen Elizabeth* were carved from holly ; the three hatches on the latter are painted white and the three forward hatches on the *Stirling Castle* painted brown. There are also three flush hatches on the after part of this ship and these were made from pieces of paper painted the same colour as the deck.



The funnels of the " Queen Elizabeth "

At the same time I made the swimming pool on the *Stirling Castle* (see Fig. 10). A square Bristol board box was made to fit into the hole in the deck, the inside of the box was painted a pale blue, the steps leading down were painted in and a piece of stiff cellophane was fitted in to represent the water. As this appeared too smooth and glass-like, I stippled it over with some white lac varnish which improved the effect. The teak margin round the pool was represented by narrow pieces of brown painted paper. As a finishing touch I cut a turnip seed in half and painted it in brightly coloured stripes to represent a play-ball and stuck it in the cellophane.

BOLLARDS AND FAIRLEADS

These were mostly made up from very small dowels of holly and strips of paper, the *Stirling Castle's* were painted brown and the *Queen Elizabeth's* black. The bollards on the latter are an unusual type in that they do not appear to have base-plates, so I just bored holes in the deck, and put in some headless pins of an appropriate diameter, afterwards painting them black.

EDITOR'S NOTE

In the April instalment of this series the drawing on page 36 *was numbered Fig.* 8, *this should have been Fig.* 6 *and as such will be described in all future references. We apologise to our readers for this error.*

To be continued

An Old Ship's Lantern

ONE METHOD OF MAKING

By S. WOODS

AN efficient way of making galleon stern lanterns is given in this short article. The method is quite simple, the materials to hand, and the tools few. The author, who has made several, of varying sizes, has always been very gratified with their appearance. The general idea of one type of lantern is given in Fig. 1.

The first requirement is a former, Fig. 2. A short piece of dowelling, $\frac{3}{8}$ in. diameter stock will do. A $\frac{1}{2}$ in. of one end should be tapered from $\frac{3}{8}$ in. to $\frac{3}{16}$ in. This tapered end should be suitably smoothed with fine sandpaper. A shallow saw cut may be made at the large end for ease in a later operation.

The main body of the lantern is made of stiff note paper. This is rolled round the end of the former and glued, Fig. 3. Try to keep the glued joint parallel with the axis of the former. A quick drying balsa cement is best. When dry, trim the ends of the little paper cone. This is where the shallow saw cut is handy. This cone of paper is slipped back on to the former end, and the panes of the lantern drawn in carefully, Fig. 4. Two rows of panes are needed, and there may be four or six panes in a row according to the size of the lantern or the inclination of the maker.

The next step is to cut out each pane carefully with a razor blade. This may sound difficult but, with the cone mounted on the former, the task is delicate but not difficult. Patience is one of the cheap things left to us nowadays. There are of course several handy little cutting devices on the market that are easier to manipulate than a razor blade. This is a question for the lucky owner.

After successfully cutting the panes remove the framework from the former, Fig. 5. Wrap a piece of cellophane paper, package wrapping, round the tapered dowel, touch the inside of the lantern frame with balsa glue and slip it over the wooden jig again, pressing it firmly into contact with the cellophane. Trim the ends. Thus the lantern becomes glazed in a very realistic fashion.

The remaining job is of course to cap the little glazed cone, Fig. 6. This is easily done by cutting circles of plywood, and if, when cut and smoothed, they are split along the layers of ply, the small discs will be found to be just about a suitable thickness. The cover for the top of the lantern should be chamfered to a knife edge. It can be fixed to the top of the lantern frame by simply gluing on to the underside a similar, but slightly smaller disc of wood, so that the whole fits neatly into the cone,

Continued on next page

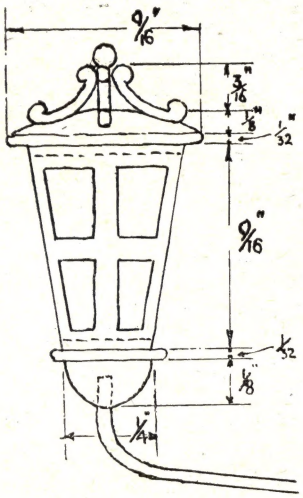


FIG. 1.

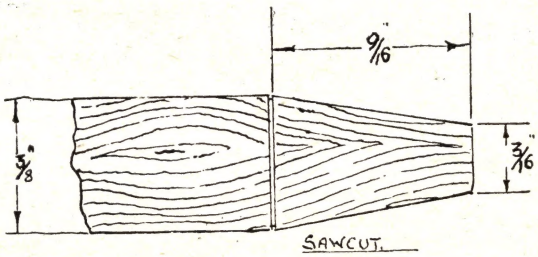


FIG. 2.

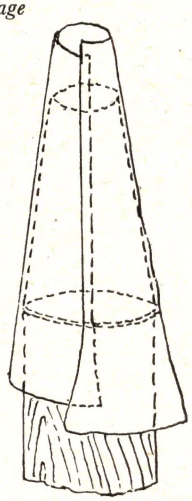
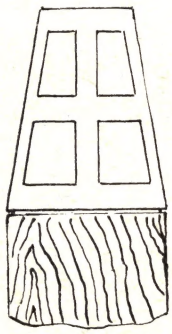


FIG. 3.



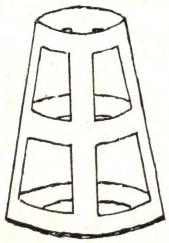


FIG. 4. (LEFT)
FIG. 5. (ABOVE)

FIG. 6.

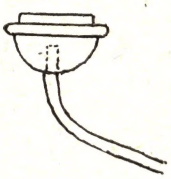


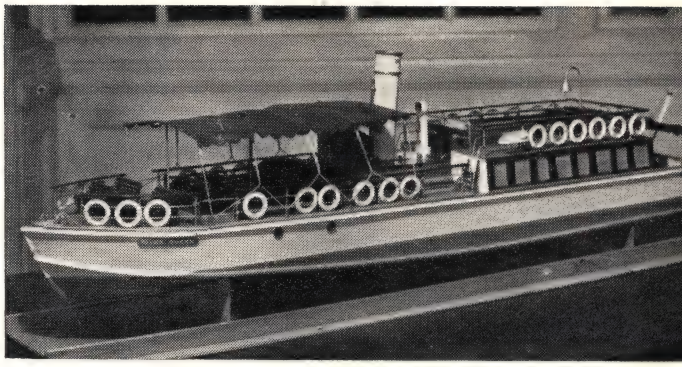
FIG. 7.

OUR READERS' MODELS No. 9

RIVER STEAMER

"RIVER QUEEN"

By R. J. GIBBS



THE *River Queen* is the outcome of an urge to build an out-of-the-ordinary craft which demanded only a limited skill and workshop. Her lines were laid down three years ago from visual knowledge of the prototypes plying the upper Thames during the summer. I believe there are only three left under steam—the many sister ships have gradually been refitted as diesel craft. Construction was completed two months after laying the mahogany keel. Ribs were cut from scrap and the skin is four pieces of $\frac{1}{16}$-in. 3-ply to form a hard chine hull. The rather large engine-room (cigar boxes!) accommodates a twin-drum boiler which steams a Stuart Turner "Meteor" engine located under the (removable) companion roof.

The superstructure was built up mainly from scrap, as were the fittings and ventilators. The deck rails are of $\frac{1}{16}$ in. and $\frac{1}{8}$ in. brass wire soldered at the crossings. The uprights are threaded to nut up under the deck. Tight washers run on the threads form the flanges.

The forward deck, from the "gates" to the saloon is removable for access to the boiler, and she carries electric light on both decks, in the saloon, and for navigation.

The seats are of $\frac{1}{8}$ in. × $\frac{1}{16}$ in. hardwood glued to brackets, and, luckily white rubber rings of exact scale-size were found which serve admirably and economically as lifebelts.

The hull is finished red with white freeboard, and the superstructure is left natural and varnished. The seats are stained teak and the rails painted aluminium. Awnings were devised from an old dark green window blind. The completed craft (less machinery) cost about 30s.

She is 43 in. on the waterline with a 10 in. beam and displaces 12 lb. loaded. By sacrificing the lighting circuit, there is sufficient room and bouyancy in the saloon to accommodate radio control for which this model is well suited.

An Old Ship's Lantern (*Continued from previous page*)

leaving a slight overlap of the chamfered top circle of wood. Disc sizes must be left to be finally checked by the builder, as cone dimensions will vary slightly.

The ornamentation on the top of the lantern cover is also made of plywood. This is $\frac{1}{16}$ in. wood cut with a fine fretsaw blade to the appropriate scroll shape or, perhaps a better idea, a $\frac{3}{16}$ in. piece of ply cut to shape and split—each little piece to be rubbed with fine sandpaper. Thereafter it is all a question of patience and a steady hand to hold a pair of tweezers while these pieces are glued into the neat pile on the top of the model. The small ball shown right at the junction of the three scrolls was, in the author's case, a task of "niggling" with a file and a match stalk. Wood was filed away until the little ball looked correct then it was broken off gently, and with tweezers, carefully placed in position. Doubtless there must be much better ideas which will occur to the enterprising modeller.

The base of the lantern, Fig. 7, consists again of a pair of ply discs, made so that the innermost one slips into the base of the framework. The bulbous termination is of $\frac{3}{16}$ in. dowelling, the curve being shaped in the hand-drill (poor man's lathe) then, a $\frac{1}{8}$ in. or $\frac{3}{16}$ in. length cut off with a fret saw. A $\frac{1}{16}$ in. hole should be drilled into the curved end for the accommodation of the fixing support.

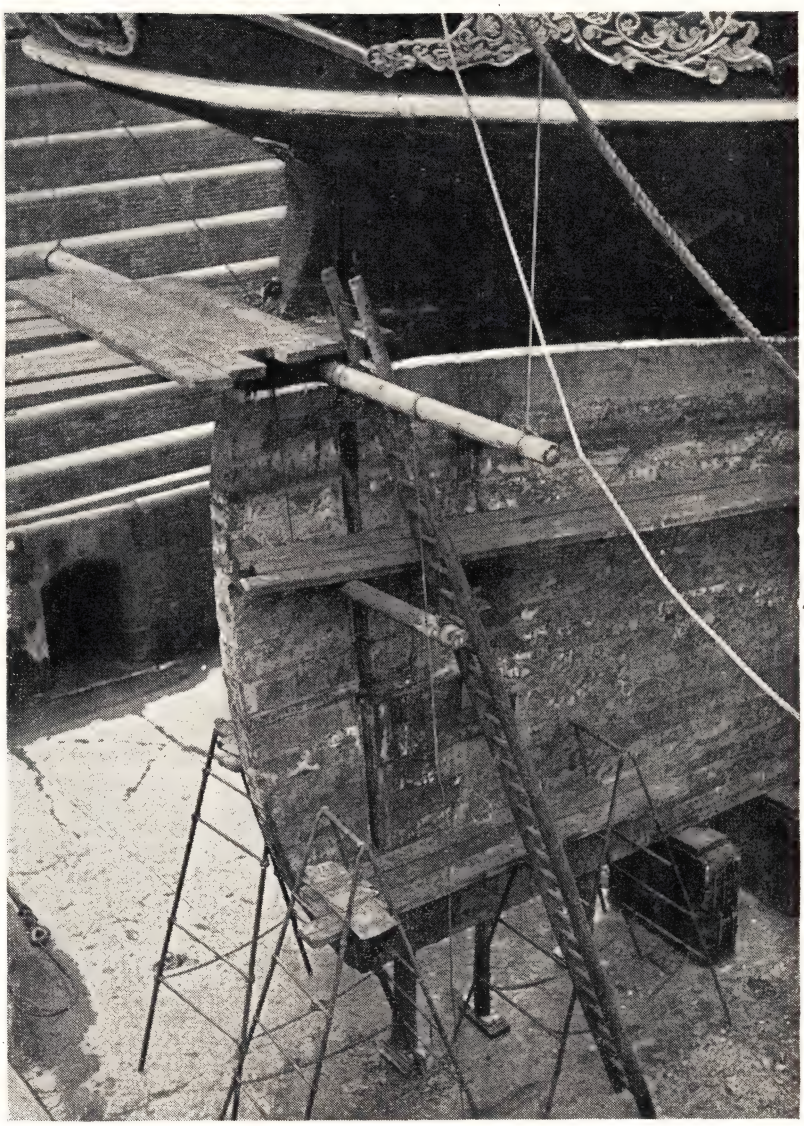
This fixing support in the case illustrated is simply a wire nail bent to the required shape, the pointed end being admirably suited for fixing to the finished hull. Here again the builder's imagination will easily be able to supply any little embellishments that may be appropriate.

There are many possibilities in this scheme that could be tried. There are, for instance, very tiny six volt (maybe lower voltages) pea bulbs on the market. These could be incorporated into the base with one lead fixed to the support and the other insulated and twisted down the support and into the hollow hull.

Also there is the question of some filling medium for the cone of the lantern. Maybe the whole could be filled in with some type of balsa cement, and, if electric lamps were fitted, the glow would have the appearance of the old time dim light that would be expected from horn-paned lanterns. The filling medium would in addition lend much strength to the structure.

"CUTTY SARK"

Some unusual views of the famous clipper

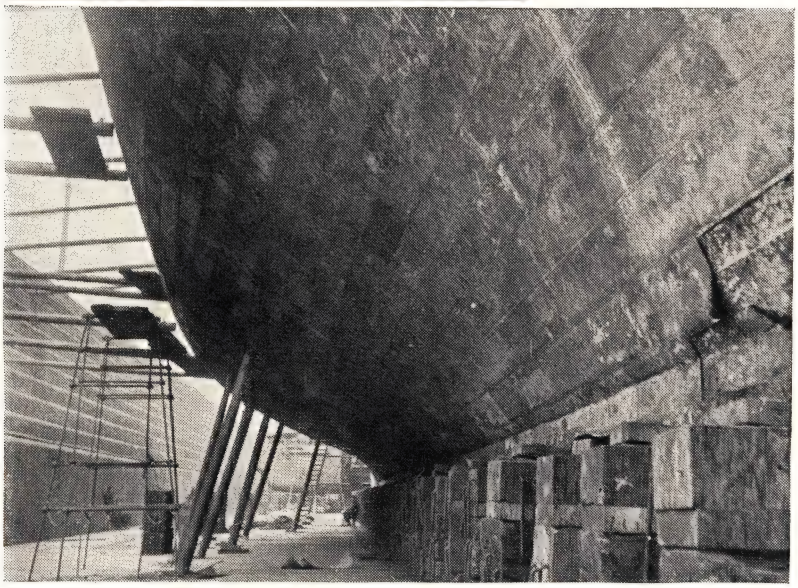


(Above) The stem and figurehead. The figures for the draught have presumably been 16 *and* 18

(Right) The stern showing the deep narrow rudder

These and the photos on the opposite page were taken by permission of the Port of London Authority

WHEN the *Cutty Sark* was taken into dry dock some weeks ago we were privileged, through the courtesy of the Port of London Authority, to take along our photographer and to get some pictures of her lovely underwater lines. Our cover picture shows the very fine entrance on the waterline increasing in fineness downward toward the forefoot and keel. The *Cutty Sark* was a little heavier under the quarters than some of her contemporaries, and this is shown in the photograph taken under the counter. This gave her additional bouyancy aft and as a consequence she was able to run in a sea which would poop a more slender ship. The great rise of floor is well seen in the photograph taken along the keel, and in this photograph the run of the copper plating can be followed showing the stealers worked in to allow for the fullness amidships. The coppering was in good condition and where plates had been removed for examination the timbers underneath were found to be in a very satisfactory state. We ourselves examined them at the stem, sternpost, keel, and at the turn of the bilge and were impressed with their soundness. The deck houses and the rigging seem to have deteriorated rather badly, but so long as the hull is sound there is some hope that she may be kept afloat. The topgallant rail and the moulding along the sheer line seem to have suffered somewhat in the process of time, although the damage suggests accident or rough usage rather than decay. The present figurehead is not worthy of the ship. The articulation of the outstretched arm at the shoulder is hopelessly incorrect and the clumsiness of the entire figure is quite out of keeping with the ship. There must surely be some photograph or drawing of the original figurehead, and even if that is lost any capable marine artist with a knowledge of human anatomy could produce something more suitable.



(Upper) View under the counter showing the fullness at the load water line aft giving the extra buoyancy

(Below) Along the keel. Note rise of floor and plates removed for inspection

To completely restore the ship would cost a considerable sum of money but we are certain that, if given the opportunity, shiplovers throughout the country would gladly subscribe for the sake of preserving an example of the sailing ship of the period when she was in her most beautiful form.

Photo by courtesy of Sir Frederick Maze, K.C.M.G., K.B.E.
Main deck looking aft

*The FOOCHOW POLE JUNK

By

G. R. G. Worcester

Late River Inspector, Chinese Maritime Customs

THE triangular portion below the wings is fitted with a shaped piece of hardwood laid transversely. Thirteen feet abaft the stem beam is a massive deck beam which acts as additional support for the foremast. The whole bow is of exceptionally strong construction so as to take the pound of the seas. Some of the frames of the vessel are prolonged above deck level, and the horizontal planking forming the heavy bulwarks is laid outside them (Fig. 2). The bulwarks are 6 ft. high at the bow where they merge into the spreading wings, and decrease gradually to 3 ft. high at the gangway just abaft the mainmast.

The longitudinal deck planking is continuous until the tenth bulkhead. Here the quarter deck commences at an elevation of 4 ft. and runs through to the stern. The bulwarks which now commence consist of 3 ft. high railings each of which is pierced again just before the break of house for the companion ladder, which is foreign in design. Access to the holds is provided by seven hatches. One compartment serves as a fresh-water tank.

A house is built over the after part of the quarter deck. It extends to the stern, and consists of one large compartment which serves as a living and mess room (Fig. 3).

A ladder leads from the quarter deck to the poop above the house. The bulwarks slant up and terminate in a straight line in the side of the house, and their place on the poop is taken by an ornamental handrail which in its turn is crossed and superseded by the rising line of the three wales which finish off the line of the handrail right round the stern. The poop is flush throughout. The raised quarter deck and high poop enable the junk to be worked in safety and comparative comfort during bad weather when every other part of the vessel is awash.

At the after part of the poop there is a small house in which is the laodah's, or master's, bunk, it also serves another important function, for here is housed the shrine to Kuan Yin, the goddess of Mercy.

The rudder, as is the case with all sea-going junks, appears to be disproportionally large, but this disparity is explained by the necessity for holding the vessel against a drift to leeward. The rudder which weighs some tons, measures 32½ ft. in depth from the rudder head to the lower edge and 11½ ft. in width at its broadest, which is at the bottom. The large and heavy rudder-post, 15 ft. in length, is iron bound at intervals of a foot throughout. It is slung by a tie, and is hoisted and lowered by a bight of chain passing through a sheave in the rudder with both parts of the

The ship with its cargo of logs

*Continued from April issue, page 34.

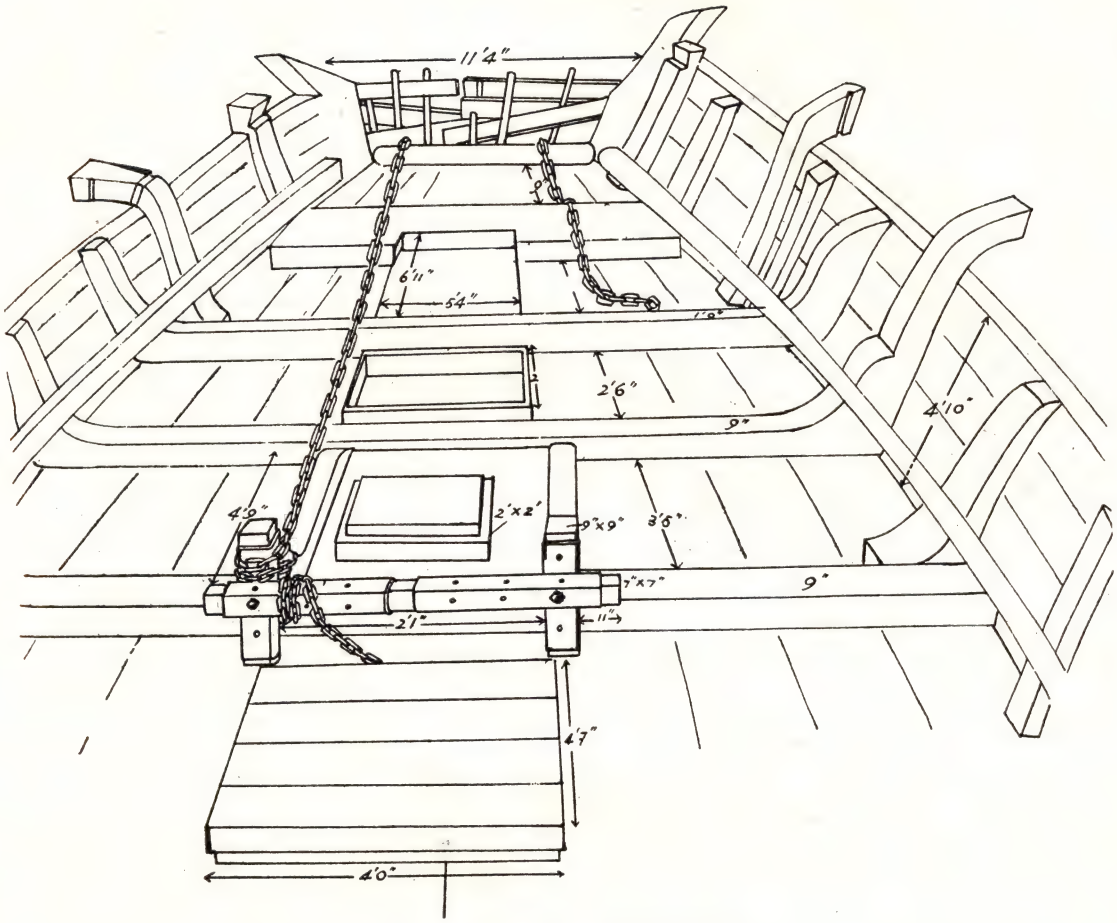


Fig. 2. View of main deck looking forward

chain passing round the barrel of the wooden windlass. See Fig. 4. There are no gudgeons, and so it is kept in position by grass ropes attached to the bottom of the bearding and passed under the ship's bottom and over the bows. The huge rudder can be hoisted with comparative ease by a few men who manipulate the windlass by means of two handspikes inserted into the holes provided. In harbour the rudder is kept in the raised position. When lowered the rudder draws as much as 11 ft. A very long tiller is used, which is operated by two luff tackles.

Three strongly built sampans are carried, one on each quarter and a third over the stern. They are slung from spar davits.

There are three hardwood masts. The foremast, which is 61 ft. high above the deck and hooped at frequent intervals, has a considerable rake forward. It is housed against the first bulkhead, which is similarly raked to afford continuous support. The deck beam, already alluded to, into which the foremast takes, measures 4 ft. in width and is proportionately thick. The mainmast, which stands vertically 93 ft. above the main deck, has a circumference of over 8 ft. It is stepped in a tabernacle, see Fig. 5. These massive tabernacles stand 3 ft. 5 in. above the deck and fit into an appropriately heavy transverse beam which measures 2 ft. 9 in. across and 8 in. in depth. There is no reason why this baulk of timber should not reach from bulwark to bulwark, but it invariably fails to extend the whole width of the deck. The mizen mast which is 54 ft. in height above the deck, is stepped about a foot out of the centre line of the ship. All three masts carry balanced lug-sails in their truest form.

In this craft the sheeting arrangements vary according to the number of battens on each sail, which are not always identical. The mainsail, for instance, may have eight or nine battens : all of them, however, are always found on the port side of the sail.

The usual number of battens on the sail is eight. In this case they are divided into two groups of four, both groups being identically arranged with the main sheet connecting and controlling them.

With regard to the foresail the number of battens varies between six and eight and appears to have no relation to the number of battens on the mainsail.

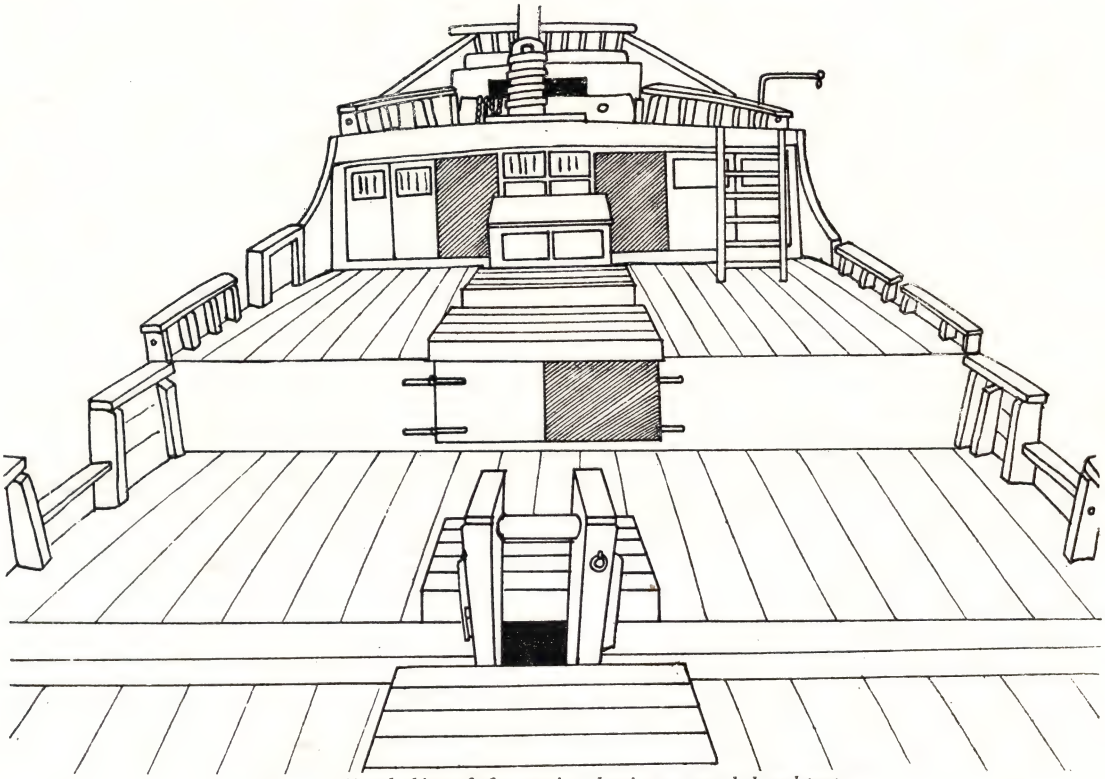


Fig. 3. View looking aft from waist, showing quarter deck and poop

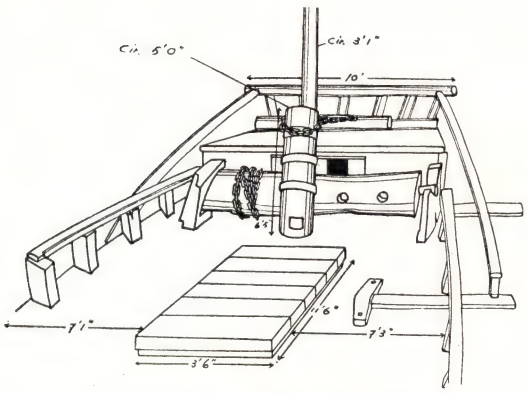


Fig. 4. View of poop showing rudder stock

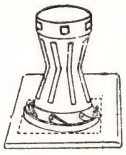


Fig. 6. Capstan

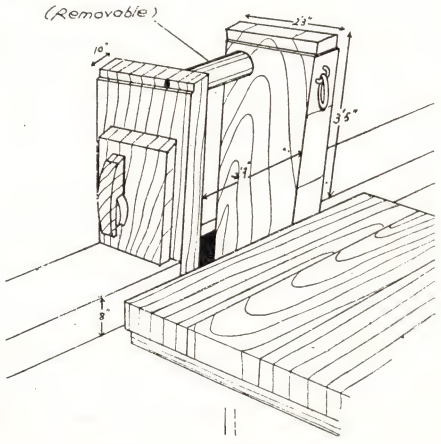


Fig. 5. Mast tabernacle

All are situated on the starboard side of the sail. The most common number is eight when they are arranged in three groups of three, three, and two battens respectively.

The mizen usually carries six battens which are always on the port side of the sail. These battens are usually arranged in two groups of three.

A capstan provided on the maindeck midway between the fore and mainmasts is used for hoisting the sails. See Fig. 6.

For ponderous dignity the Foochow Pole junks are unsurpassed, yet their manoeuvrability is such that they need no outside help when entering and leaving port. The Chinese inventiveness and originality have reached their highest point in these craft, in which may be seen epitomised their ingenuity of ship design and the unique skill in seamanship of their crews.

*P.S. GLENSANNOX

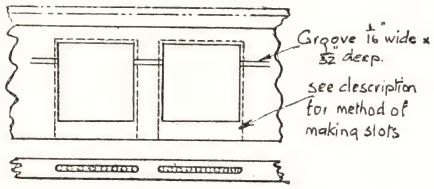
A $\frac{1}{4}$-in. Scale Working Model

By A. S. Miller

TO retain the thin glass windows in place in the wood strips, each one is pressed into a slot formed behind each window opening.

This slot is made by drilling from the bottom of the strip a series of $\frac{1}{16}$ in. holes at the respective openings.

The wood between these holes should be cut away so as to form a slot $\frac{13}{16}$ in. long × $\frac{1}{16}$ in. wide (Fig. 13). The outer edge of the slot should be drilled to come into the position shown by the dotted lines on the window detail. Into the slots so formed thin squares



View of underside of window strips showing slots for glass

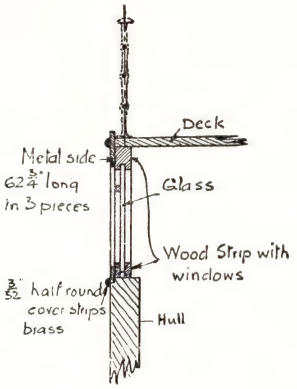
Fig. 13

of glass are inserted from the bottom. These squares should be cut from odd $\frac{1}{4}$ in. plate negatives and should be $\frac{13}{16}$ in. × a bare $\frac{13}{16}$ in. wide.

The whole length of the strip should now have a groove $\frac{1}{16}$ in. wide × 1/32 in. deep cut in the position shown on the front of the strip. A corresponding strip $\frac{1}{16}$ in. wide × 1/32 in. deep should be laid into this groove. This divides each window into an upper and lower portion. In the upper portion minute strips of cedar are fixed to the glass and the lower portion is divided into two equal casements by a vertical strip also durofixed to the glass.

From the end of the strips for the fore saloon windows to the block at the stem a strip about $\frac{1}{4}$ in. sq. × 8 in. long must be fixed behind the metal sides on both port and starboard.

Fig. 14

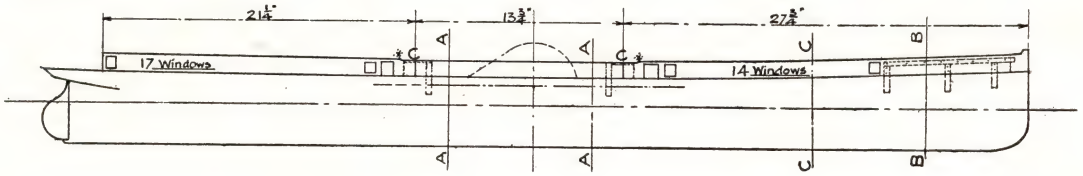


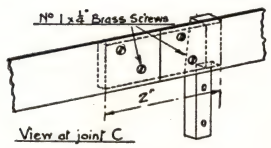
This is to support the deck which otherwise would be unsupported between these points.

A detail of this is shown and also the uprights to which the metal sides are fixed (Fig. 15).

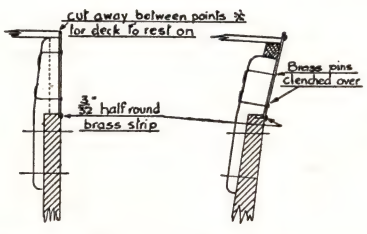
A detail of the joints on the metal sides is also shown (Fig. 15). These if made in one piece would be unwieldy when the window openings are being cut. There is therefore a plain portion behind the

*Continued from April issue, page 31



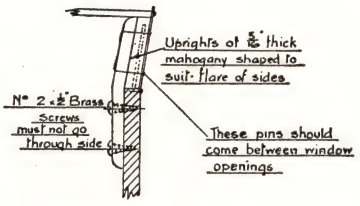


View at joint C



Section on AA

Section on BB


Uprights of 3/16 thick mahogany shaped to suit flare of sides
№ 2 x 3/4 Brass Screws must not go through side
These pins should come between window openings

Section on CC

Fig. 15

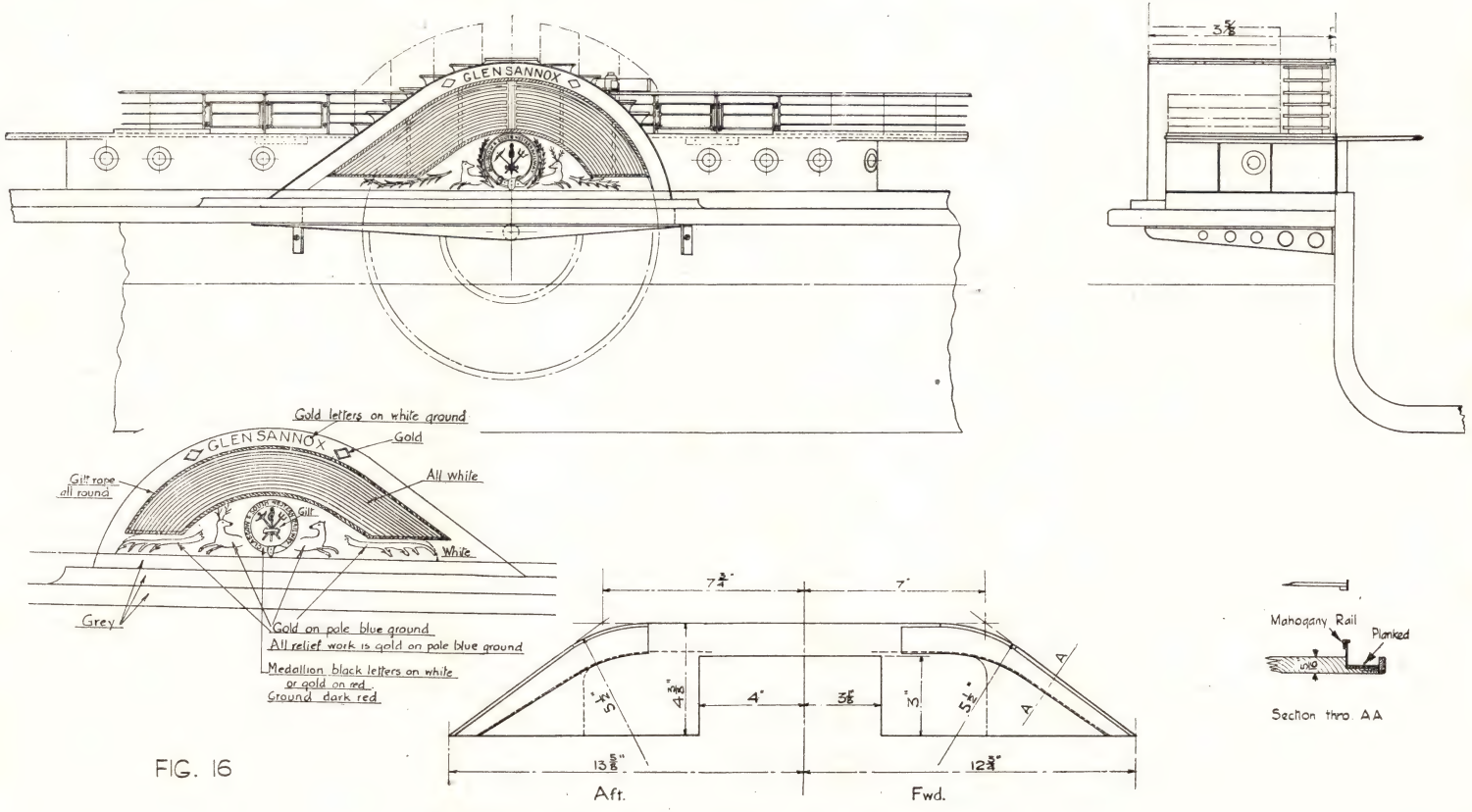


FIG. 16

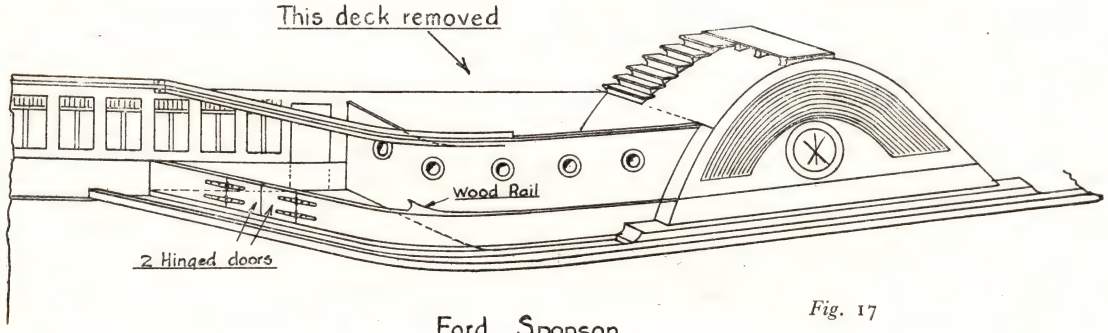
DETAILS OF PADDLE BOX AND SPONSONS

(The sponsons are drawn to half scale of paddle box)

Readers will notice the discrepancy between the elevations of the port and starboard paddle boxes. The port or lower one is given merely for the colour scheme. The upper one should be followed in making the model.

paddle box with a separate fore and after saloon section containing the openings for the windows.

A decision about completing all this detail work must be the concern of the builder, but it amply repays in the general appearance, and in a $\frac{1}{4}$ in. scale model, it is not too difficult. The spacing of these small panes should be noted, i.e. in the after saloon there are seven in each window, but in the fore saloon only five. The spacing of the small verticals must be absolutely right, otherwise the whole effect is spoilt. Notice the ornamental pillars between the window openings on the after saloon. These are cut from 18 or 20-gauge metal, and as already mentioned, may be either of brass or aluminium, depending on the metal of the sides. Spaced at regular intervals on the bottom edge of the sides are holes for pinning them to the hull.



Ford. Sponson

Fig. 17

Paddle Boxes. On account of the paddle wheels being slightly overscale, these are not absolutely to scale, and the effect is to raise the landing platforms on the top very slightly.

The paddle box is made from 20-gauge aluminium sheet, $3\frac{5}{8}$ in. wide × 12 in. long. The back should be made from a piece of the same sheet, flanged over a hard-wood former shaped, as shown in the drawing (Fig. 9).

After flanging, the back must be riveted to the top by brass domestic pins or small rivets with the heads inside, the other end being countersunk.

For the front a piece of holly or hornbeam of about 3/32 in. finished thickness is required. This wood is very suitable, because of its close grain and freedom from splitting.

After smoothing one face, which will be the front, mark out in pencil, the eight concentric openings, and the position of the stiffeners which will be fixed at the back. (See Fig. 16). Drill 3-pin holes in the centre line of each stiffener. When all the marking out has been done, the cutting out of the openings should be done by a fine fretwork saw, cutting them alternately and finishing off with a small file. A fine-bladed sharp penknife is useful also for this, and with care no breakage or splitting should happen. After all the slots have been cut and finished off, the stiffeners should be durofixed and pinned with the pins clenched over at the back, using the three holes already drilled.

The medallion, $1\frac{1}{16}$ in. diameter, carrying the old G. & S.W. crest is cut out of holly or beech, and is just a piece of careful wood carving with appropriate tools. The two panels fore and aft of the centre line with the heads of the deer and the doe in relief should be cut from the same wood.

The lettering round the medallion may depart from the colour scheme of the prototype. In this, the lettering was in gold on a red ground, but if this is considered to be too difficult to execute in the model, they could be black on a white ground.

The moulding round the edge of the opening is made of fairly heavy rigging cord, pinned, durofixed, and then gilded. The rest of the colour scheme is shown on the drawing. Here again, it pays to carry this out fully, as the paddle box on the prototype was a joy to look at.

The method of fixing the front to the metal is also shown (Fig. 9), with details of the landing platforms, and steps to the deck from these platforms. (Fig. 16.) Each tread is, of course, fixed separately to the metal by two pins and durofix.

The sponsons (Fig. 16) are best cut out of yellow pine for the sake of lightness, to the shape and size shown on the drawings. They are secured to the hull by 2 in. × 10 wood screws put through drilled holes from the inside of the hull. Each sponson is supported by two brass brackets (see Fig. 16) and ten stays each secured to the hull by four pins of which only one need go through to be turned over inside.

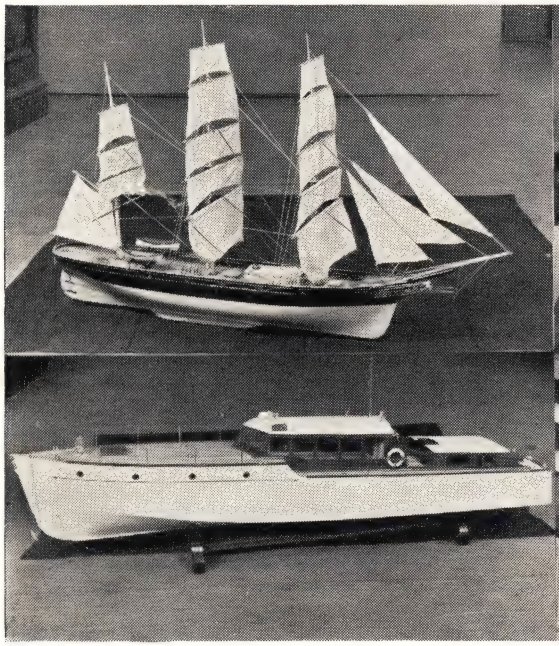
Each sponson carries the paddle box with the various lavatory and other compartments (Fig. 17) as well as the brass angle frame to which the feathering device is fixed. (See Fig. 9). The sides are formed out of the same material as the saloon sides with the round port openings drilled $\frac{1}{4}$ in., as shown. These differ from the ports in the hull, in that each has a polished brass rim 3/32 in. wide, i.e. $\frac{7}{16}$ in. outside diameter × 1/32 in. thick. These are secured in the exact position by brass pins with the heads countersunk flush. On the prototype,these rims were always kept brightly polished and, in the model after polishing, they should be lacquered with a clear medium. A small pane of glass should be fixed on the inside.

To be continued

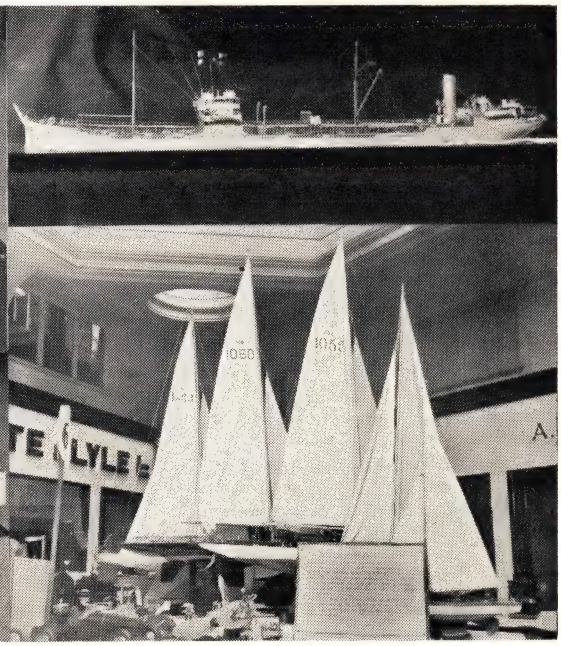
NORTHERN MODELS EXHIBITION

At the third annual exhibition of the Northern Association of Model Engineers which was held in the Corn Exchange, Manchester, just before Easter, a very fine collection of models of all types was on view. The general standard was particularly good and some notable models were displayed. With the possible exception of the aircraft models, the marine section was the largest, and one of the ship models was awarded the cup as being the best model in the show. This was Mr. D. S. Anthes' (Sheffield) water line model of the tanker S.S. *Beaconstreet* which also achieved a similar distinction in the Sheffield Exhibition some little time ago. Cabin cruisers were well in evidence and the one shown in our illustration, which was by Mr. R. Begg, of Leyland, was a very clean piece of work. It was powered by the Craftsman Twin engine which should give it a very good turn of speed. Mr. C. L. Robinson's tea clipper, *Caliph*, took first place in the working model yachts and sailing ships' section. There were some nice miniatures, the first prize in this section being awarded to Mr. J. P. M. Horsburgh's exquisite little model of the Swedish motor ship *John Gorthan*. A number of hydroplanes and yachts were shown and some galleons and ships in bottles. The local model yacht clubs gave their support and showed some fine examples of Marble-heads and 10-raters.

The trade stands were numerous and interesting and altogether there was much to interest the ship modeller.



(Above) *Mr. C. L. Robinson's Clipper "Caliph"*
(Below) *Mr. R. Begg's cabin cruiser*



(Above) *Mr. D. S. Anthes' model tanker "Beaconstreet"*
(Below) *A corner of the Model Yacht Club's display*

TRADE TOPICS

We have received samples of wire for rigging ships from the maker, Mr. J. Partridge of 39, Swan Street, Attercliffe, Sheffield. We had already heard of this wire from a correspondent in Birmingham, who spoke very highly of it. On examining very carefully under a glass the specimens sent, we feel that it comes up to our highest expectations. The wire is closely wound and as in every case phosphor-bronze is used it should be strong and durable. We consider that it should find a ready market with builders of model steamers and warships and also with those who specialise in the later sailing ships. Model yachtsmen also might find it very useful. The maker, Mr. Partridge, has spent his life in making wire rope, but had to give up work a few years ago owing to an accident. He has now designed and built a machine for making wire rope, and is in a position to supply all reasonable requirements. The samples received include wires of from 2 to 6 strands and they are made up to 12 strands. As an indication of the diameter the 5 standard wire measures 1/64 in. diameter. Incidentally a 100 ft. coil of this size costs 2s. 6d. and coils of 1,000 ft. in length may be obtained if required.

News from the Clubs

INTERNATIONAL RADIO CONTROLLED MODELS SOCIETY

The society, in conjunction with the M.P.B.A. and the M.Y.A. has undertaken to give demonstrations on the model pond at the South Bank Exhibition at weekends during the Festival of Britain. Our dates are May 4th and 12th, June 9th and 30th, and every third weekend thereafter.

The second *Daily Dispatch* international radio-controlled model boats contest is to be held at Fleetwood on August 4th, 5th and 6th. Further particulars can be obtained from the honorary secretary. Future meetings of the society are :—

Birmingham group. Saturday May 5th at 2.30 p.m., in the History Class Room, University of Birmingham, Edmund Street, Birmingham.

London group. At the recent a.g.m., all the officers were re-elected. Sunday, May 13th at 2.0 p.m., at the Horseshoe Hotel, Tottenham Court Road, London.

Manchester group. Sunday, May, 20th at 2.30 p.m., at Wellington Chambers, 2, Victoria Street, Manchester.

Tyneside group. Friday, 25th May, at 7.30 p.m., at 176, Westgate Road, Newcastle. Mr. F. Thompson will speak on " Reed Control and Tuning."

Hon. secretary : T. F. SUTTON, The Lodge, Manchester Grammar School, Manchester, 13.

MODEL YACHTING ASSOCIATION

The British Open Championship for Marbleheads will be sailed for at The Lake, Dovercourt, on May 12th-14th (Whitsun weekend). Three boats per club may be entered and the entry fee is 7s. 6d. Further particulars may be obtained from the honorary general and racing secretary C. R. SEABROOKE, 29, Tresham Avenue, Hackney, London, E.9.

THE THAMES SHIPLOVERS AND SHIP MODELS SOCIETY

The lecture by Mr. Hope Johnson, London Editor of the *Journal of Commerce* and *Sea Breezes* on " Early Steamers of the Clyde " was greatly enjoyed by a large and appreciative audience. The lecture was illustrated by lantern slides. We trust our square rig and prototype sailing experts are getting ready for the regatta at Hove, on July 29th. A number of interesting outings have been arranged for the summer months, particulars of which may be obtained from the hon. secretary : H. V. EVANS 34, Summeringfields Road, Hendon, N.W.4.

Y.M. 6-M OWNER'S ASSOCIATION

About 50 people attended the annual dinner of the association which was held in March at Pimms Red House Restaurant, Bishopsgate, E.C.2. The company included officers and members from the London Clubs and the M.Y.A. headquarters. The president, Major General W. C. Holden, spoke of the similarity between the R.O.R.C. Rule and the rules for the " A " Class and 5½ metre class yachts and of how the design of the models had influenced that of the modern ocean racer. Films in colour were shown of the racing at Gosport and Fleetwood in the regattas of 1947 to 1950, these films being by courtesy of Mr. V. F. Wade of Fleetwood and Mr. F. Shackleton, hon. publicity officer of the M.Y.A.

Fixtures for May and June are as follows :—

Y.M. 6-m. O.A.

Annual general meeting, May 6th, 11.0 a.m. ; Serpentine Cup (open), June 3rd, 11.0 a.m. ; Handicap Race, June 10th, 2.0 p.m. Handicap Race, June 24th, 2.0 p.m.

South London M.Y.C.

Club Race, May 13th, 2.0 p.m. ; 36 in. race, May 20th, 2.0 p.m. ; Surbiton Shield III, May 27th, 2.0 p.m. ; Surbiton Shield IV, June 17th, 2.0 p.m.

Hon. racing secretary : Major G. B. LEE, 72, Westfield Road, Surbiton, Surrey.

MARLOW S.M.E.E.

The secretary writes that the club is making good progress and that the equipment of the workshop is going ahead. The society has a strong ship modelling section and would be pleased to hear of others in the district who may be interested.

Hon. secretary : J. HOBBS, JUNR., The Boathouse, Marlow, Bucks.

POOLE MODEL YACHT AND POWER BOAT CLUB

This club has recently been formed and for this season the Yachting Section is concentrating on the Marblehead Class. The Power Boat Section runs both hydroplanes and prototype models.

Hon. Secretary : R. PRICE Esq., 3, Hunger Hill, Poole.

REDDITCH AND DISTRICT M.E. SOCIETY

This Society is holding its first Exhibition on 12th May and 14th May, Whit weekend. Some interesting maritime models will be on view. Hon. Secretary : W. A. ALDERTON Esq., 20, Rookery Road, Redditch.

BROMLEY MINIATURE POWER BOAT CLUB

This club is quite a live affair, running " C " and " D " class hydroplanes. Prototype and radio-controlled boats are also very much in evidence. Hon. Secretary : G. O. CAIRD Esq., 26, Blackbrook Lane, Bickley, Kent.

BOURNVILLE MODEL YACHT AND POWER BOAT CLUB

Point to Point Contest at Valley Lake

Continuing an interesting test of steering sailing models of various classes recently, Mr. M. Fairbrother won premier place with his boat *Heather*, scoring 16 points out of a possible 18. The commodore, Mr. W. H. Ray, with *Una* secured second place with 14 points.

Presentation to Mr. and *Mrs. H. Harlow*

After holding the post of secretary of the club for almost 27 years Mr. Harlow with his wife, has left this country for South Africa. During a recent Saturday evening, which opened with a display of model yachting films, the assembly adjourned for refreshments, after which Mr. Cottrell, a founder member of the club, presented Mr. and Mrs. Harlow with two travelling cases as an expression of gratitude for their great services to the club. The City of Birmingham club, which was well represented at the gathering, also joined in subscribing to the presentation.

Annual General Meeting

At the a.g.m. at which the chair was taken by the president of the club, Mr. P. S. Cadbury, C.B.E., Mr. M. Fairbrother was elected to fill the vacant position of secretary with Mr. J. Pitt as assistant secretary.

PAIGNTON AND DISTRICT M.Y.C.

The Marblehead Championship for S.W. England was competed for at Goodrington on March 11th. In addition to local entrants six competitors and about thirty supporters came from Clevedon near Bristol (100 miles away !) and the Exeter M.Y. Club also supported the event. The results were :—

1. T. Thornton with *Astra*, 25½ pts. (Clevedon M.Y.C.).
2. F. Pearce with *Mayfly*, 22½ pts. (Paignton M.Y.C.).
3. F. Morris with *Challenger*, 22 pts. (Clevedon M.Y.C.).

The 36 in. R. Championship for S.W. England was sailed on Saturday, March 17th, the results being :—

1. G. Gibbons, 18 pts. (Paignton M.Y.C.).
2. F. Pearce, 14 pts. (Paignton M.Y.C.).
3. P. Vale, 13 pts. (Danson M.Y.C.).

The Royal Torbay Yacht Club rose bowl trophy for 10-raters was sailed on Sunday, March 11th, the results being :—

1. D. Pinsent with *Trixie*, 36 pt. (Paignton M.Y.C.).
2. P. Lush with *Janetta*, 26 pts. (Paignton M.Y.C.).
3. L. Foot, 24 pts. (Paignton M.Y.C.)

The club has been very active during the past winter, and among the new boats built are an " A " Class, two 10-raters, and a 36 in. R. Class. The next open event and the S.W. of England Championship for 10-raters will be sailed in October, possibly on the same weekend. Further particulars from the commodore, D. Pinsent, 2, Barcombe Road, Preston, Paignton, Devon.

HASTINGS M.Y. CLUB

On a recent Sunday Hastings M.Y.C. held an " M " class open event for the Coates Cup. The four clubs, Hastings, Eastbourne, Guildford, and Brighton and Hove competed, the scores being, A. Mullet, Brighton and Hove, with *Honey* 50 pts., M. Holt (Guildford) with *Senlac II* 46 pts., W. Fillery (Eastbourne) with *Ocean Wave* 37 pts., and W. Richardson (Hastings) with *Robert* 31 pts.

THE WALLASEY M.P.B. AND YACHT CLUB

About two years ago seven model power boat enthusiasts decided to re-form the old Wirral Model Yacht Club which was founded in 1895. They have now a membership of 28, a fine sailing water in the local park, the use of a club house provided by the Parks Committee, and the support of the borough council. In an attempt to form contacts with other M.P.B. Clubs in the area they are holding an open regatta on Sunday, July 22nd, in Central Park, Wallasey. The Festival of Britain committee is offering two prizes in addition to the two already provided. Clubs or lone hands will be warmly welcomed. The events will be for steering, nomination, club relay races and round-the-pole hydroplanes. Light refreshments free to visitors. Further particulars from, and entries to the hon. secretary, H. A. JACKSON, 21, Deveraux Drive, Wallasey.

TYNEMOUTH M.Y. CLUB

The fixtures for May are as follows :—

May 6th. Sailing, old type models, for the Knott Cup.
May 13th. Steering competition for the Purdy Cup.
May 27th. Steering competition for the Wakefield Cup.

Starting time 10.30 a.m. on each day. Further particulars from the hon. secretary, S. H. WALKER, 18, King Edward Road, Tynemouth.

EASTBOURNE AND DISTRICT M.Y. CLUB

The team race for 36 in. class models held recently was a very close fight. Each club entered six yachts and the wind faded from light to almost nil as the competition proceeded. The final result was Hastings 72 pts., Eastbourne 70 pts.

The following Sunday seven " A " class boats raced for the Arno Cup. The wind was strong and squally from the S.W., and after two " boards " one skipper had to retire owing to some of his gear being carried away. The race finished at 3.30 p.m. with Mr. B. Phelan, the holder, again winning the cup.

Editor's Correspondence

DEAR SIR,

I have under construction, to the *Model Engineer* design, a *Javelin* destroyer and I should be grateful for your guidance on the following points :—

(1) Instead of 70 in. length the model is 60 in. with a proportionate decrease in beam (but not draught). She is to be driven by a Stuart Sun $\frac{3}{4}$ in. × $\frac{3}{4}$ in. twin S.A. engine working at 90 lb. per sq. in., steamed by a Scott type W.T. boiler and coupled direct to twin screws. What size propellers (diameter and pitch) do you recommend ?

(2) The design rather suggests that decks of the vessel are cambered. Is this so ?

(3) What do you recommend for the finish of the decks ? Is the original of steel covered with planking or just painted steel ?

(4) Should the hull below the waterline be black or red ?

(5) For ease of working I intend omitting the rails or at least making them easily detachable. Am I correct in assuming that in a vessel of this type the rails are actually taken down when in action ?

I appreciate that some of my queries may be covered by the 1944 *Model Engineer* articles describing this model, but I have unfortunately been unable to obtain copies of the relative back numbers.

Yours truly,

Colchester, Essex. G. K. TRANTER.

Answering the queries in rotation :—

(1) *The scale you propose would be quite satisfactory, especially as you do not intend to reduce the draught, and the engine should be quite suitable for this boat. The propellers suggested in the original articles were about 2 in. diameter, and 2½ in. pitch. You might need to reduce the diameter of this somewhat as the clearance of your boat will probably be less than on the 70 in. model, but I think these figures should give you a reasonable result. It is practically impossible to forecast the most suitable dimensions for the propeller, and these are usually found by experiment.*

(2) *The decks of the earlier destroyers were cambered, but of late years there is a tendency to reduce this, and in some cases to do away with it altogether. I suggest you make your model with only a very slight camber.*

(3) *The decks were of steel covered with Cortecine which I understand is a form of granulated cork which makes the decks less slippery when wet.*

(4) *I imagine the under-water body is painted red, as most anti-fouling compositions are of that colour.*

(5) *With regard to the rail stanchions, these are hinged down in the fore-and-aft direction when in action. The rails are presumably chain or iron rope, and must be disconnected to enable the stanchions to be taken down. Particulars of the hinge were shown in a drawing in the "Model Engineer" for 8th March, 1945.*

"The Model Engineer" EXHIBITION

The exhibition will be held this year at its usual venue, **The New Horticultural Hall, Westminster** and the date is **August 22nd to September 1st, 1951.** We are planning a better than ever show this Festival Year and are assured of an excellent display of models. The competition section of the exhibition is open to all amateurs, and the Marine Models Section is divided into six classes. The usual prizes and awards will be given for the best models. Full details and competition entry forms are now available from The Exhibition Manager, 23, Great Queen Street, London, W.C.2.

Please send me details and competition entry forms for

THE 1951 MODEL ENGINEER EXHIBITION

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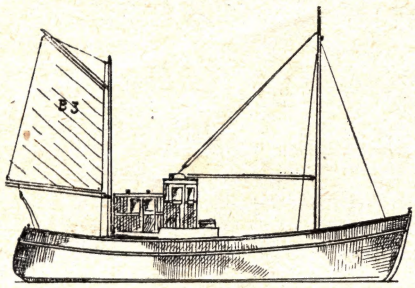

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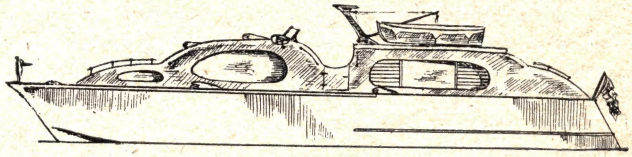

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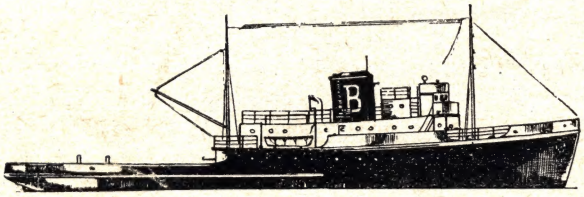

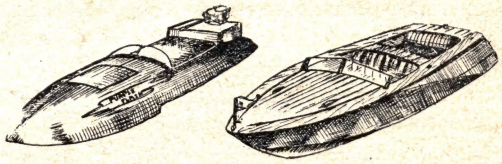

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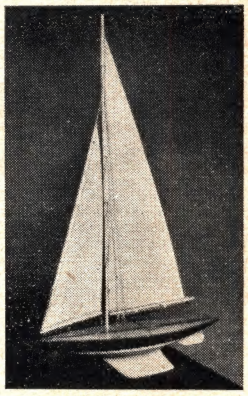

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